PRACTICE EDITING TEXT

Be sure you are in the Atari Memo Pad Mode. That can be accomplished by removing the BASIC cartridge or by typing "BYE" if you are in BASIC. Copy the following text exactly as it is written. You will make corrections after you have finished typing the whole section. The letters and words that are underlined show you what changes need to be made. You will type them as regular letters or words, without the underlining. The '*' shows were a word has been omitted. You should leave out the '*' when you make corrections.

Color Register--The zpecific location in and computers memory that stores the colro you tell it to.
pEEK--A BASIC comnand that tells the computer to look into a specific location in the computer''s memory and see what what is stored there.
POKE--A * command that tells the computer to put a new number into a specific location in the computer's memory.

Now you are ready to correct the paragraph. Use the guide on the next page to make the corrections. The idea is to help you learn to use as few keystrokes as possible, so you should not retype whole lines to correct mistakes. The corrected version below should help you to check your final copy.

CORRECTED VERSION

Color Register--The specific location in the computer's memory that stores the color you tell it to.
PEEK--A BASIC command that tells the computer to look into a specific location in the computer's memory and see what is stored there.
POKE--A BASIC command that tells the computer to put a new number into a specific location in the computer's memory.

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CHALLENGES

Use FOR..NEXT loops to write a program (or programs) to solve one or more of the following problems.

1. Write a program to output one of the designs below. Print your name instead of the word NAME if you do the first one.

A.
```
NAME
 NAME
  NAME
   NAME
    NAME
     NAME
      NAME
```

B.
```
     *
    ***
   *****
  *******
 *********
***********
```

C.
```
    *
   * *
  *   *
 *     *
  *   *
   * *
    *
```

D.
```
XXXXX                   XXXXX
    XXXXX           XXXXX
        XXXXX   XXXXX
            XXXXX
        XXXXX   XXXXX
    XXXXX           XXXXX
XXXXX                   XXXXX
```

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CHALLENGES
(CONTINUED)

2. Write a program to print one of the number sequences.

A. First sequence:

5 24 43 62 81 100

B. Second sequence:

3 40 77 114 151 188

3. Write a program that shows all the numbers between 1 and 100 that are divisible by 3. If you have time, change the program, so that a person can ask for all the numbers between two numbers that are divisible by a third number.

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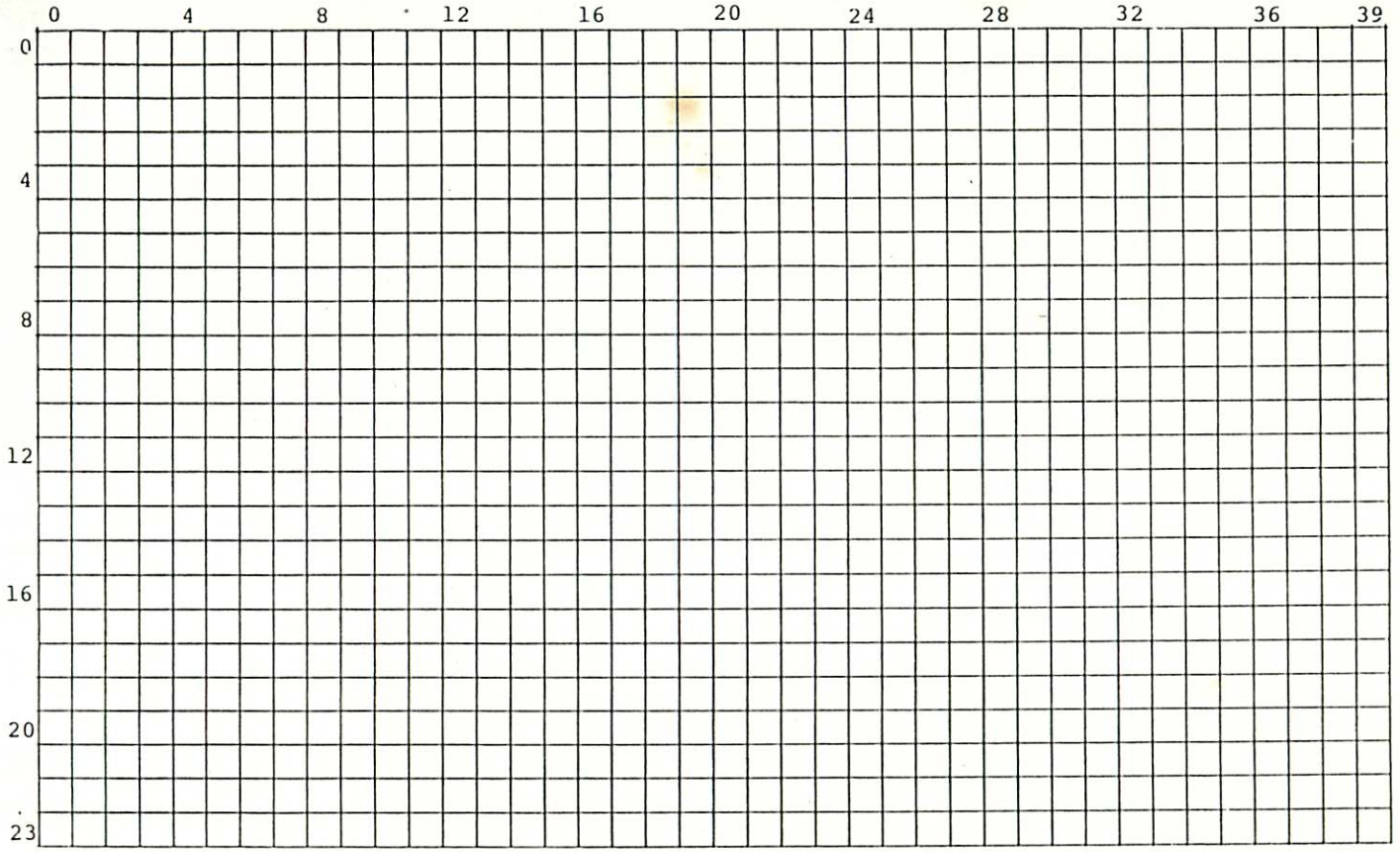
Graphics Mode 0



Notes: _____

LOOPS
FOR . . . NEXT
(CAMPER COPY)

```
10 REM FOR...NEXT Introduction
20 FOR COUNT=1 TO 10
30 PRINT COUNT
40 NEXT COUNT
```

```
10 REM Printing lots of letters.
20 FOR NUMTIMES=1 TO 400
30 PRINT "Z-";
40 NEXT NUMTIMES
50 PRINT "WOOPS! TIME TO WAKE UP."
```

```
10 REM Using variables and limits
20 START=1
30 FOR NUM=START TO 10
40 PRINT NUM
50 NEXT NUM
```

```
10 REM Dangerous and improper
15 REM use of a variable
20 FOR COUNTER=1 TO 25
30 COUNTER=COUNTER+1
40 PRINT COUNTER
50 NEXT COUNTER
```

```
10 REM Illustration of a Delay Loop
20 PRINT "Please wait a moment."
30 FOR WAIT=1 TO 3000:NEXT WAIT
40 PRINT "Thank you for waiting."
```

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LOOPS
FOR . . .NEXT STEP
(CAMPER COPY)

```
10 REM Illustrating STEP
20 FOR COUNT=1 TO 20 STEP 2
30 PRINT COUNT
40 NEXT COUNT
```

Add line 15 and change line 20.

```
15 NUMSTEP=4
20 FOR COUNT=1 TO 40 STEP NUM
```

```
10 REM Using variables with STEP and FOR...NEXT
20 PRINT "By what number would you like to"
30 PRINT "count?";
40 INPUT COUNTBY
50 PRINT "Let me think..."
60 FOR WAIT=1 TO 3000:NEXT WAIT
70 PRINT "OK.  I will count by ";COUNTBY
80 FOR COUNTER=0 TO 50 STEP COUNTBY
90 PRINT COUNTER
100 NEXT COUNTER
```

```
10 REM A program to count backwards
20 PRINT "{CLEAR}":REM Clears screen
30 "***COUNTING BACKWARDS***":PRINT
40 PRINT "Please give me a number"
50 PRINT "between 2 and 100.  ";
60 INPUT NUM:PRINT
70 PRINT "Counting backwards can be fun."
80 PRINT "Starting with ";NUM;" and ending with
   1.":PRINT
90 FOR WAIT=1 TO 1000:NEXT WAIT:REM Delay loop to
   allow time to read
100 FOR COUNTER=NUM TO 1 STEP -1
110 PRINT COUNTER;" ";
120 NEXT COUNTER
130 PRINT :PRINT:REM Advances before starting the
    program again.
140 GOTO 40:REM Ask for another input
```

```
10 REM Sound demo of STEP
20 FOR PITCH=0 TO 255 STEP 1
30 SOUND 0,PITCH,10,10
40 NEXT PITCH
50 FOR PITCH=255 TO 0 STEP -1
60 SOUND 0,PITCH,10,10
70 NEXT PITCH
```

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NESTED LOOPS
(CAMPER COPY)

```
10 REM Demonstration of nested loops.
20 FOR OUTERLOOP=1 TO 5
30 PRINT "OUTERLOOP = ";OUTERLOOP
40 FOR INNERLOOP=1 TO 3
50 PRINT "   INNERLOOP = ";INNERLOOP
60 NEXT INNERLOOP
70 PRINT
80 NEXT OUTERLOOP
```

Change the values in lines 20 and 40 to:

```
20 FOR OUTERLOOP=1 TO 3
40 FOR INNERLOOP=1 TO 5
```

and then predict what the output will be before you run the program.

```
10 REM Printing stars
20 FOR NUMDOWN=1 TO 10
30 FOR NUMACROSS=1 TO 10
40 PRINT "*";
50 NEXT NUMACROSS
60 PRINT
70 NEXT NUMDOWN
```

Change the values in lines 20 and 30, so that the program makes one of the boxes below:

```
**          **********          ********
**          **********          ********
**          **********          ********
**                              ********
**                              ********
**                              ********
```

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[illegible]

NESTED LOOPS
(CAMPER COPY - CONTINUED)

```
10 REM A triangle of stars
20 FOR ROW=1 TO 10
30 FOR STARS=1 TO ROW
40 PRINT "*";
50 NEXT STARS
60 PRINT
70 NEXT ROW
```

Change the program, so that the triangle is turned upside down like this:

```
*******
******
*****
****
***
**
*
```

```
10 REM Moving indenting before printing.
20 PRINT "{CLEAR}":REM Clear screen.
30 PRINT "INDENT"
40 FOR INDENT=1 TO 10
50 FOR SPACES=1 TO INDENT
60 PRINT " ";
70 NEXT SPACES
80 PRINT "INDENT"
90 NEXT INDENT
```

```
10 REM Combining color and sound
20 PRINT "{CLEAR}":REM Clear screen
30 FOR COUNTER=1 TO 5
40 FOR COLORPITCH=50 TO 150
50 POKE 710,COLORPITCH:REM Changes screen color
60 SOUND 0,COLORPITCH,10,6
70 FOR WAIT=1 TO 10
80 NEXT WAIT
90 NEXT COLORPITCH
100 NEXT COUNTER
```

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GOTO
(CAMPER COPY)

```
10 REM The Allowance Con
20 REM Ask for an allowance in a
30 REM different way.  Ask for 1 cent
40 REM the first week.  Then ask that
50 REM the amount be doubled each week.
60 REM The program shows you how much you
70 REM would earn each week.
80 PRINT " ":REM Clear screen
90 WEEK=1:ALLOWANCE=1
100 PRINT "WEEK #";WEEK
110 PRINT "ALLOWANCE = $";ALLOWANCE/100
120 PRINT
130 ALLOWANCE=ALLOWANCE*2
150 WEEK=WEEK+1
210 GOTO 100
```

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